

CLAIMS

1. Method for generating a base band signal ( $V_p$ ) representative of the transmission power of a radiofrequency signal ( $S$ ) transmitted by a transmitting station, characterized in that it comprises the following steps:

- extract a part ( $S'$ ) of said radiofrequency signal ( $S$ ) transmitted by said transmitting station;
  - mix said part of the radiofrequency signal ( $S'$ ) with itself to generate a voltage signal ( $S''$ ) with at least a DC component;
  - filter said voltage signal ( $S''$ ) so as to keep only the DC component of said voltage signal, and
  - amplify said filtered voltage signal using a logarithmic function,
- to generate said base band signal ( $V_p$ ) representative of the transmission power of said radiofrequency signal transmitted by said transmitting station.

2. Method according to claim 1, characterized in that the voltage signal ( $S''$ ) filtering step and the amplification step using a logarithmic function are carried out by the same logarithmic amplifier (208).

3. Method according to claim 1, characterized in that said filtering step of the voltage signal ( $S''$ ) is carried out by a low pass filter (206) and said amplification step using a logarithmic function is carried out by a logarithmic amplifier (208).

4. Method according to any of claims 1 to 3, characterized in that it is implemented in a transmitting station within a telecommunication system using a CDMA type multiple access technology .

5. Application of the method according to any of claims 1 to 4 for controlling the transmission power of a transmitting station, characterized in that the base band signal generated by said method is supplied to a

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feedback loop controlling the transmission power from said transmitting station.

6. Device for generating a base band signal ( $V_p$ ) representative of the transmission power of a radiofrequency signal ( $S$ ) transmitted by a transmitting station, characterized in that it comprises:

- a passive coupler (200) to extract a part ( $S'$ ) of the radiofrequency signal ( $S$ ) transmitted by said transmitting station;
- a mixer (204) to mix said part ( $S'$ ) of the radiofrequency signal ( $S$ ) transmitted by the transmitting station with itself to generate a voltage signal ( $S''$ ) with at least a DC component; and
- a logarithmic amplifier (208), to generate, from said voltage signal ( $S''$ ), said base band signal ( $V_p$ ) representative of the transmission power of the radiofrequency signal ( $S$ ) transmitted by the transmitting station.

7. Device according to claim 6, characterized in that it further comprises a low pass filter (206) located between said mixer (204) and said logarithmic amplifier (208) to only allow the DC component of the voltage signal ( $S''$ ) output from the mixer (204) to pass.

8. Transmitting station within a telecommunication system, characterized in that it comprises a device according to claim 6 or 7.

9. Transmitting station according to claim 8, characterized in that it is a base station or a mobile station within said telecommunication system.

10. Telecommunication system comprising at least one transmitting station according to claim 8 or 9, characterized in that it is implemented within at least one telecommunication network belonging to the group comprising:

- GSM telecommunication networks,
- PCS telecommunication networks,
- UMTS telecommunication networks.

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